

## **APPENDIX Q**

**DOCTOR DESIGN INC.**  
**Engineering Services Quotation**

This Engineering Services Quotation is provided by Doctor Design, Inc. (hereafter referred to as "DDI") to Innovad (hereafter referred to as "Company").

**Statement of Work**

DDI shall be engaged by Company as an independent contractor. This engagement consists of quickly prototyping a low functionality unit of Company's intelligent pager product (hereafter referred to as "Project"). DDI shall complete the Project to the requirements of this Statement of Work and Technical Specifications (if supplied) and/or other information provided by Company. If desired, Company shall provide a detailed Statement of Work and Technical Specification prior to the start of work. The Fees and Schedule quotations are based on the following assumptions:

- DDI will modify an off the shelf pager to incorporate an auto dialer.
- Design will have a single button for dialing.
- DDI will locate off the shelf packaging for prototype unit.
- DDI will write software need to support auto dialing.
- Three assembled and tested prototypes will be delivered to Company, one assembled and tested prototype and one bare printed circuit board will be retained by DDI.

**Company Deliverables**

Company shall provide all unique equipment required for prototype testing and debug for the Project. This will include:

- Four (4) off the shelf pager units to be modified.
- Activation for all pager units.
- Technical contact for questions

Company shall provide DDI with an Acceptance Test Plan (ATP) within 2 weeks after start of project. Prototype or production parts which pass the ATP shall be deemed accepted by Company.

**DDI Deliverables**

**PRINTED CIRCUIT BOARDS** -- DDI will deliver provide three (3) tested and working prototypes in enclosures to Company.

## Fees and Schedule

This proposal is good until 5/28/93

Schedule:	Start Project	0 weeks ARO	Net 0	\$ 9,000
	Design Review	2 weeks ARO	Net 15	\$ 8,000
	Deliverables	5 weeks ARO	Net 15	\$ 8,000
	Total Project NRE			\$25,000

Prototype estimate is detailed on the estimate worksheet contained in Exhibit A.

Prototype Estimate	2 weeks ARO	Net 0	\$ 3,000
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\$20k

\* If actual prototype cost exceeds estimated cost, excess will be billed monthly Net 0. If estimated prototype cost exceeds actual cost, excess will be refunded at end of project.

\*\* If any DDI technician time is used for prototype assembly, it will be billed at \$75 per hour.

\*\*\* Shipping cost of sending prototypes to Company will be billed directly to Company by shipper.

\*\*\*\* Payment terms are subject to credit approval.

\*\*\*\*\* Work will not begin until start payment is received. If DDI agrees to begin work with a PO# and not a start payment, work will begin three (3) working days after receipt of PO.

All payments received after the payment due date will accrue interest at the rate of one and one-half percent (1½%) per month.

## Changes

DDI will use its best efforts to implement any changes and/or modifications to the technical specification after start of the Project. When Company requests a change, the Project will be placed on hold and investigation into the amount of time required to make changes will be performed on an hourly basis at the rate of \$85 per hour. A written estimate covering extra design NRE, schedule changes, additional prototype costs and estimated recurring costs will be given to Company at the end of the investigation. Upon receipt of Company's written acceptance or rejection, DDI will again start working on a fixed cost basis. All milestones in the current fixed contract will adjust for the amount of time spent in investigation and waiting for Company's acceptance or rejection. DDI shall

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not be responsible for any delays caused by time spent investigating Company's requested changes or waiting for Company's response.

### **Warranty**

DDI will warrant that the design and final product is free from defects and meets technical specifications as measured by the ATP for 90 days from the date of delivery to Company. This warranty does not apply if modifications are made that were not designed by DDI. If Company has isolated a repeatable problem in DDI designed sections, DDI will fix the problem at no charge to Company. Time invested by DDI to help Company isolate problems will be billed at \$85 per hour. This charge will apply regardless of whether the problem lies in DDI designed sections or in sections designed by others. Company will pay for any and all shipping charges.

### **Termination**

This project may be terminated by written notice from the Company. Should the project be terminated after an authorization to start work, all project fees up to and including the next project milestone and any prototype expenses incurred are due and payable.

### **Ownership of Project**

DDI agrees that all technology, schematics, specifications, designs and any other deliverables under this agreement are the property of Company upon payment in full, within terms, of all milestone, prototype expenses and other invoices submitted by DDI under this agreement. Company agrees that all technology, schematics, specifications, designs and any other deliverables under this agreement are the property of DDI until all invoices have been paid in full; this is in addition to any other remedies available to DDI.

### **Relationship of the Parties**

The parties intend that DDI shall be an independent contractor and not an agent or employee of Company. DDI adheres to all laws and ethical standards applicable to professional engineers and performs in a manner consistent with generally accepted procedures for the profession. DDI acknowledges this design is "work for hire" under the laws of the State of California, and DDI, or its employees or sub-contractors retain no ownership rights to the design.

### **Severability**

If any provision of this Agreement shall be held to be invalid, the other provisions shall remain enforceable unless deletion of the invalid material will defeat the essential purpose of the parties as expressed in this Agreement.

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**Indemnity**

Company agrees to indemnify, hold harmless and defend DDI, its employees and subcontractors from all liability for any loss, damage or injury to persons or property arising from or related to the performance of this agreement whether liability be based on strict liability in connection with the design, manufacture or use of the System, including without limitation all consequential damages whether or not attributable to DDI, its employees or subcontractors. The terms of this agreement shall bind and inure to the benefit of the parties and their heirs, legal representatives, successors and assigns.

**Authority**

The parties executing this Agreement on behalf of DDI and Company warrant that they have the authority to enter into this Agreement and to bind their respective company to all of the terms and conditions of this Agreement.

**Governing Law**

This Agreement shall be governed and construed by and in accordance with the laws of the State of California.

**Arbitration**

Any dispute relating to the interpretation or performance of this agreement shall be resolved at the request of either party through binding arbitration. Arbitration shall be in accordance with the rules of commercial arbitration of the American Arbitration Association before a single arbitrator in San Diego, California. Judgment upon any award by the arbitrators may be entered by the state or federal court having jurisdiction. The parties intend that this agreement to arbitrate be irrevocable.

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Company

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Company

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Name (Print)

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Name (Print)

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Signature

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Signature

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Title

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Title

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Date

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Date

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## EXHIBIT A

### DDI Prototyping Methodology

DDI has included the following prototyping services:

- Printed Circuit Board Layout and Routing (PCB LAYOUT)
- Printed Circuit Board Fabrication (PCB FAB)
- Component Purchasing and Kitting (PURCHASING & KITTING)
- Printed Circuit Board Assembly (ASSEMBLY)
- Management and Expediting of all of the Above Services

#### WHAT WE NEED FROM THE CUSTOMER:

For best results, the customer should provide DDI with as much information regarding the eventual manufacturing process as is possible. This will allow us to design a printed circuit board which is easily transferred to the customer's manufacturing facility for volume production. Some of the information which would be helpful includes:

- Manufacturing Technology -- Through hole or Surface Mount?
- Hand Insertion or Auto Insertion -- What auto insertion rules to design to? *Motorola*
- Approved Vendors List -- What families and vendors of components are already on the customers approved vendor list? *Motorola*
- "Design for Manufacturability" -- Any other rules the customer wants followed in the design of the printed circuit board.

*Same as  
Motorola*

#### DETAILS OF THE SERVICES

##### Printed Circuit Layout and Routing (PCB LAYOUT)

DDI will manage a third party firm which specializes in layout and routing. We will provide guidance in critical routing restrictions, layer count, manufacturing constraints and other guidelines necessary to successful completion. We will check photo-plots, and provide engineering feedback to the routing process.

At DDI's option, DDI may use in-house resources to layout and route PCB's. This service will be charged at industry-standard rates as a prototyping expense.

##### Printed Circuit Board Fabrication (PCB FAB)

DDI will select a vendor suited to the printed circuit board to be fabricated. We will evaluate number of layers, density, number of holes, line widths and spacing, size of board and turnaround time requirements, to select the vendor best suited to the project. We will expedite the manufacturing process and monitor the vendor's progress.

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**Component Purchasing, Receiving and Kitting (PURCHASING & KITTING)**

DDI, using in-house resources, will order components from qualified vendors and distributors, receive components, and kit for assembly. We will also follow up on missing or late items with the vendors.

**Printed Circuit Board Assembly (ASSEMBLY)**

DDI will deliver the component kits to a third party firm which has been selected specifically to meet the requirements of the project.

**STANDARD TERMS AND CONDITIONS FOR PROTOTYPING SERVICES****Charges:**

All outside prototyping costs have a 35% Gross Margin. This includes:

PCB Layout and Film

PCB Fabrication, Test and Tooling

Component Cost

Assembly and Tooling

Internal clerical costs for purchasing, receiving and kitting are billed at \$350.00/day.

**Quantities:**

Our standard terms and conditions for turnkey prototyping includes fabrication of 5 bare PCB's. Four (4) of these units will be assembled for testing. DDI will deliver 3 tested units to the customer, and retain one tested unit and one bare PCB for reference and support.

**NOTE THAT THIS PROJECT HAS BEEN QUOTED WITH THE ASSUMPTION THAT 4 UNITS WILL BE TESTED.** If additional units are requested, the additional engineering cost per board identified below is due upon delivery of working prototype boards. This engineering cost covers testing of additional boards. Cost of additional PCBs, components, and assembly will be based on actual prototype costs.

	STANDARD TERMS	SPECIAL TERMS
Bare Printed Circuit Boards Fabricated	5	_____
Total Assembled Units to be Tested	4	_____
Total Assembled Units to be Delivered	3	_____

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AMOUNT TO BE ADDED TO ENGINEERING BID  
FOR EACH ADDITIONAL UNIT DELIVERED

\$ \_\_\_\_\_

**PAYMENT SCHEDULE FOR PROTOTYPING PROJECTS:**

Because prototyping costs are derived from outside services, and are accrued rapidly on a quick turn project, the entire amount of the estimate is due up front to begin the prototyping. The refund or additional charges will be computed when the prototyping is completed, and these charges must be paid net 30 days.

**GENERAL NOTES ON THE PROTOTYPING PROCESS:**

The purpose of the prototype process is to validate and demonstrate a new hardware design. The "prototype" which emerges from this process will be a combination of the original design, and the changes which were made to the design in the process of hardware "debugging".

Depending on the complexity of the design, these design changes may involve programmable logic changes, "cut and jump" wiring changes, layout and routing changes and other mechanical constraint changes such as connector placement.

After the debug process, our customer typically submits the hardware design to various environmental tests. This will include UL/CSA/VDE/FCC/COLA and other regulatory and safety qualifications. The customer will also submit the hardware to integration with mechanical components such as chassis, power supplies, monitors...etc. The result of all of this testing typically includes changes to the Printed Circuit Board above and beyond the "wiring" changes isolated in hardware debug.

Our customer typically takes control of the engineering documentation for a product immediately after the prototype hardware is debugged. This allows the customer to be in control of the final revision of the printed circuit board (if another revision is required). At this time, the customer's manufacturing group can make final minor manufacturability changes, and incorporate any changes from the testing mentioned above.

If requested, DDI will be available to handle the PILOT MANUFACTURING run of boards. We can make the changes mentioned in the preceding paragraph. We will quote this, when requested, as a completely separate project. Depending on the quantity of units requested in this "second run", this quote will include all of the steps of the prototype project, plus engineering and technician time for debugging pilot units.

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**PROTOTYPING PROJECT ESTIMATE WORKSHEET**

Customer Name: \_\_\_\_\_  
Project Name: \_\_\_\_\_  
Estimate Date: \_\_\_\_\_  
Estimator: \_\_\_\_\_

PCB LAYOUT Assumes _ week layout _____ _____	\$ _____ (1)
PCB FABRICATION Assumes _____ _____	\$ _____ (2)
COMPONENT COST Assumes _____ _____ _____	\$ _____ (3)
ASSEMBLY Assumes _____ _____ _____	\$ _____ (4)
VERIFICATION/CERTIFICATION Assumes _____ _____ _____	\$ _____ (5)
COSTS (LINES 1+2+3+4+5)	\$ _____ (6)
COST PLUS 35% GROSS MARGIN (LINE 6 / .65)	\$ _____ (7)
PURCHASING LABOR ESTIMATE	\$ _____ (8)
RECEIVING AND KITTING LABOR ESTIMATE	\$ _____ (9)
ESTIMATE TOTAL (LINES 7+8+9)	\$ _____ (10)

**NOTE THAT THIS IS AN ESTIMATE ONLY.**

Actual Invoices will track actual costs.

Sales Tax may be required.

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**DOCTOR DESIGN INC.  
CREDIT APPLICATION****BY:**

NAME OF COMPANY

ADDRESS

YEARS AT ADDRESS

CITY

STATE

ZIP

AREA CODE

PHONE

The following information must be provided. It will be held in the strictest confidence.

**OWNERSHIP:**☐ Corporation☐ Partnership☐ Check here if incorporated within the past 12 months☐ Individual

1. NAME(S) OF PRINCIPALS(S) ADDRESS PHONE
2. \_\_\_\_\_
3. \_\_\_\_\_

**FINANCE:**

BANK

BANK ADDRESS

PHONE

ACCOUNT NUMBERS

BANK

BANK ADDRESS

PHONE

ACCOUNT NUMBERS

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**REFERENCES:**

1. \_\_\_\_\_  
BUSINESS NAME ADDRESS ZIP PHONE  
\_\_\_\_\_  
ACCOUNT NUMBER
2. \_\_\_\_\_  
BUSINESS NAME ADDRESS ZIP PHONE  
\_\_\_\_\_  
ACCOUNT NUMBER
3. \_\_\_\_\_  
BUSINESS NAME ADDRESS ZIP PHONE  
\_\_\_\_\_  
ACCOUNT NUMBER
- 

**CONTACTS:**☐ Purchase Order Required

\_\_\_\_\_  
PURCHASING CONTACT PHONE

\_\_\_\_\_  
ACCOUNTS PAYABLE CONTACT PHONE

If purchasing goods for resale, please provide reseller's certificate number:

\_\_\_\_\_

**ACCEPTANCE:**

We certify that all the information on this form is correct. We fully understand your credit terms and agree to the proper payment in consideration of extended credit.

\_\_\_\_\_  
SIGNED DATE

\_\_\_\_\_  
NAME PRINT TITLE

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